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WHAT DRIVES ORGANIZATIONS TO SHARE KNOWLEDGE WITH THEIR SUPPLY CHAIN PARTNERS?

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Abstract

Based on knowledge based view of the firm 'knowledge' is an important productive resource. Organizations need to acquire required knowledge not only from internal sources but also from other organizations. If appropriate conditions for knowledge sharing are provided, an organization is able to obtain knowledge from its supply chain partners. One of the fundamental requirements of knowledge sharing is intention to share knowledge which has been widely investigated at individual level. Intention to share knowledge needs to be investigated at organizational levels especially between supply chain partners. The current study aims to identify drivers of the intention of an organization to share knowledge with its supply chain partners. By conducting literature review, three sets of factors have been identified and described in the form of a conceptual model. These are 'contextual factors', 'organizational factors' and 'the nature of knowledge'. Both qualitative and quantitative research methodologies are planned to investigate such relationships. However, the present study only reports the conceptual model and results of the qualitative part of the study in automotive industry. The quantitative investigation that complements the current study is the subject of a future stage of the study although overall guidelines for conducting a survey are provided.

Keywords: Inter-organizational knowledge sharing, Knowledge acquisition, Inter-organizational relationship, Intention to share knowledge, Supply chain Partnership, Customer-supplier relationship.

1 INTRODUCTION

Based on the knowledge based view of the firm, knowledge-based resources are usually complex and cannot be imitated; as a result, knowledge assets in organizations can potentially produce long-term sustainable competitive advantage (Grant, 2002). No single organization can rely only on internal knowledge resources. In recent years, inter-organizational (IO) knowledge sharing has received increasing attentions by researchers and practitioners (e.g. Albino et al.1998, Nieminen 2005, Hau and Evangelista 2007, Wijk et al.2008, Cummings & Teng 2003). Many of organizational relationships have been created to transfer knowledge however with different intensities, directions and/or purpose. In supply chain partnership, knowledge sharing is not explicitly defined as the main target by the supply chain partners and it usually takes place informally and spontaneously (He et al. 2006). Supply chain partnership is a special type of IO relationship that is highly knowledge-intensive and for this reason the current paper only focuses on this kind of IO relationship.

One of the barriers to knowledge sharing is a lack of motivation to share knowledge which in turn will lead to lack of intention at both individual and organizational levels (Hinds and Pffefer, 2003). Most studies so far have focused on the intention to share knowledge within an organization (e.g. Bock et al., 2002). Many studies have investigated inter-organizational knowledge sharing (e.g. Hau and Evangelista, (2007); Easterby-Smith et al., (2008)) but very few focused on identifying the factors contributing to an organization's decision to share knowledge with its supply chain partners. For simplicity this study focuses on a simple two level supply chain in which partner organizations are not forced or motivated to share knowledge by a third party. This leads to the following research questions:

RQ1: What are the major factors facilitating the intention to share knowledge between supply chain partners.

RQ2: How the effect of these factors is perceived in automotive industry?

In order to identify factors which facilitate intention to share knowledge and act as driver for knowledge sharing, first the major determinants of IO knowledge sharing are identified by conducting a review of the existing literature. Then, based on the characteristics of the supply chain partnership, these determinants are further investigated in order to identify those that impact the intention to share knowledge. This paper extends existing literature by proposing a modified version of an existing conceptual model (Seyyedeh et al., 2009) which depicts the major determinants of IO knowledge sharing and relationships among them. The validity of the proposed conceptual model is also empirically examined in automotive industry through ten semi-structured interviews with managers who are involved in IO knowledge sharing process. The result of these interviews is presented in this paper. The remainder of the paper is organized as follows: Related concepts in the area and the results of the literature review are presented in section 2. In section 3, the conceptual model used for the empirical investigation is discussed. The research method is explained in section 4 followed by an analysis of the interview results in section 5. And finally in section 6, the concluding remarks and future work are outlined.

2 RELATED CONCEPTS

The aim of this section is to provide a common understanding of the concepts which are related to the area of this study. These concepts provide the basis for understanding and justifying the conceptual framework presented in this study.

2.1 Knowledge Sharing in Customer Supplier Partnership

Knowledge sharing in customer –supplier relationship is not considered as the main target and usually takes place informally (He et al., 2006). On the other hand, there are other forms of inter-organizational relationships that are based on formal agreements and various other arrangements in

which exchanging knowledge is the main target of those relationships such as 'licensing agreement', 'research contract', and 'equity position' (Hau & Evangelista 2007, Easterby-Smith et al. 2008).

Supply chain management aims at increasing utilization and synchronization of the chain and reducing conflicts between organizations (Pawar et al., 2003). The present study claims that sharing knowledge and expertise between supply chain members will potentially develop a common knowledge base that in turn, will facilitate both the connectivity of the supply chain members with one another, as well as the various joint decision processes.

Although supply chain partners share information related to material and cash flow in order to orchestrate supply chain activities, sharing knowledge such as skills of using particular process or tools that can add value to the organization's partners are not necessarily included in the list of activities and such lack of consideration has already led to many problems in supply chain management (Pawar et al., 2003). More specifically, the current study argues that, knowledge sharing can take place informally in customer supplier partnership. So there should be sufficient intention for an organization to share knowledge with its trading partners. Moreover, Spekman et al. (1998) found that different types of information and knowledge are exchanged based on the levels of customer-supplier relationship. Knowledge sharing in customer supplier partnership differs from those in other types of IO relationships such as alliances and joint ventures. He et al. (2006) argues that knowledge sharing between supply chain partners is generally non-targeted and less guaranteed and usually takes place in informal context. It depends on level of trust and commitment between the customer and supplier organizations and whether the requirements for knowledge sharing are met or not.

2.2 IO Knowledge Sharing Requirements and Determinants

According to Hoof et al. (2004) two major requirements must be met before knowledge sharing can take place. These are: (i) intention to share, and (ii) ability to share knowledge. These requirements are met as a result of overcoming motivational and cognitive limitations toward knowledge sharing (Hinds & Pfeffer, 2003). The notion of cognitive and motivational limitations toward knowledge sharing states that inadequate transfer of knowledge is due to two sets of limitations. These are motivational limitations and cognitive limitations. Cognitive limitations are mainly associated with the ability to share knowledge. Motivational limitations on the other hand are related to the intention to share knowledge (Ibid). By overcoming these limitations organizations will have the ability to share knowledge.

When an organization does not intend to share knowledge then it is highly unlikely to devote any time and other resources to it (Szulanski, 1996). According to the theory of motivation, individuals will intensify sharing their expertise when they are provided with incentives for doing so (Hua and Evangelista 2007, Easterby-Smith et al. 2008). Motivational limitations are related to disincentives such as risk and uncertainty that inhibit sharing of knowledge. Since effective knowledge sharing cannot be mandated, there should be enough motivation that results in intention to share knowledge.

In addition to having intention to share knowledge, organizations and individuals should be able to share their knowledge. The 'ability to share knowledge' is related to capabilities of organizations involved in knowledge sharing process to both share and absorb the knowledge. As discussed already, cognitive limitation causes difficulties in knowledge sharing and as a result it has impact on the ability to share knowledge. Cognitive limitations inhibit sharing of knowledge and are associated with the way experts store, process and state their knowledge and are referred to as cognitive factors. These factors are important in understanding why knowledge is sometimes difficult to share and communicate. Bridging the expertise Gap (i.e., 'differences in perspective between experts and novices'), and articulating tacit knowledge are cognitive problems in sharing knowledge (Hinds and Pffefre 2003). By overcoming these limitations organizations will have the ability to share knowledge. In a recent related study, a systematic review of the current literature identified factors that are most frequently addressed in the literature as the factors affecting IO knowledge sharing (Seyyedeh et al. 2009). Overall, three groups of factors that affect IO knowledge sharing were identified and are

depicted in Figure 1 and are briefly discussed below. These factors constitute the theoretical foundation of the empirical investigation in the current study.

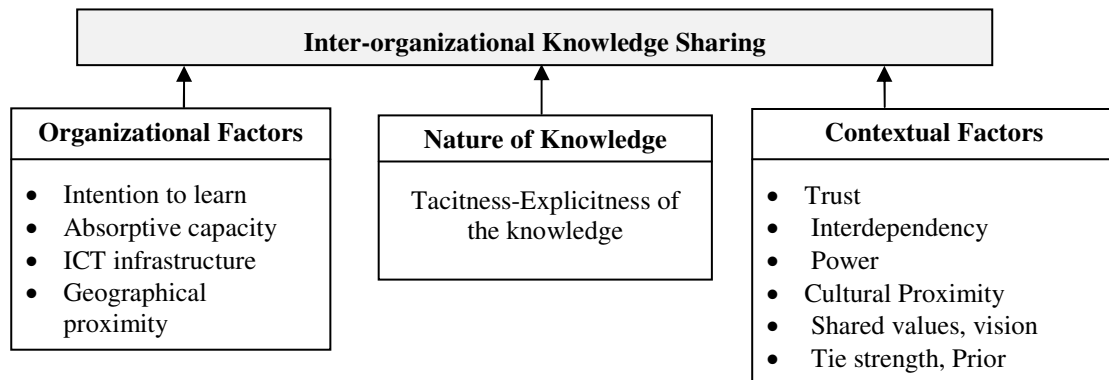


Figure 1. Three sets of factors affecting IO knowledge sharing (adopted from Seyyedeh et al. 2009)

3. THE CONCEPTUAL MODEL AND HYPOTHESES

Figure 2 illustrates the conceptual model and shows the factors that influence the intention to share and ability to share knowledge as well as the relationship among these factors. The current study recognizes the fact that some of the factors shown in Figure 1 are either closely related (e.g., trust, risk, and uncertainty), or reflect the same concept (e.g., dependency and power, cultural proximity, and shared values) Moreover, in developing the conceptual model for the present study, only those factors which have positive effect on the intention to share knowledge are considered. These factors and the related hypotheses are briefly explained in next section

3.1 Contextual Factors

Context refers to the atmosphere in which knowledge sharing takes place. This will include (i) internal context, which is the organizational culture that represents a group of behavioural skills and attitude, and (ii) the external context, that refers to a set of aspects and variables. External context shapes the environment and atmosphere in which the knowledge sharing process occurs (Albino et al., 1998). Contextual factors collected from the literature include trust, dependency, geographical proximity, uncertainty, culture and shared values (Nieminen 2005, Hau & Evangelista (2007), Wijk et al. (2008); Cummings & Teng 2003, Easterby-Smith et al. 2008, Albino et al. 1998, Wijk, 2008).

3.1.1 Trust

Trust can be interpreted as beliefs, faith, reliance, and confidence in supplier partners. It is simply a belief that one organization acts in a consistent manner and will perform in accordance with expectations and intentions (Spekman et al. 1998). It is highly related to the risk and protectiveness of knowledge. Lower inter-organizational trust will result in higher risk of losing critical knowledge due to leakage or opportunistic behaviour of the partner. Trust will cause actors to actively share their knowledge, being sure that the knowledge will not be used against its goals, will be compensated, and will earn considerable benefit in return. This reasoning leads to the following hypothesis

H 1: Trust has positive impact on inter-organizational knowledge sharing intention

3.1.2 Interdependency

This concept is highly related to the distribution of power between two partners (Nieminen 2005). Based on the resource dependency theory, dependency on an organization partner is actually dependency on partner's resources. Organizations are dependent to one another when their interactions

and collaboration are vital to remain in a competitive environment (Daneshgar & Wang, 2007). High level of interdependency will reduce the risk of opportunistic behaviour because both parties will recognize the importance of each other to perform the supply chain activities. Moreover, the interdependence will lead to anticipated future cooperation (Heide and Miner 1992). Thus, the more interdependent the organizations are to one another, the more will be the intention to share knowledge among them. The present study therefore proposes the following hypothesis:

H 2: the more customer-supplier are interdependent to each other the greater the intention to share knowledge between them.

According to culture theory, several layers of culture can be defined (Karahanna 2002). These levels of culture consist of super national, national, professional, organizational and group cultures. Depending on the situation, various levels of culture will impact on an individuals' behaviour. At organizational level, the cultures of employees who work within an organization play an important role in establishing the organizational culture.

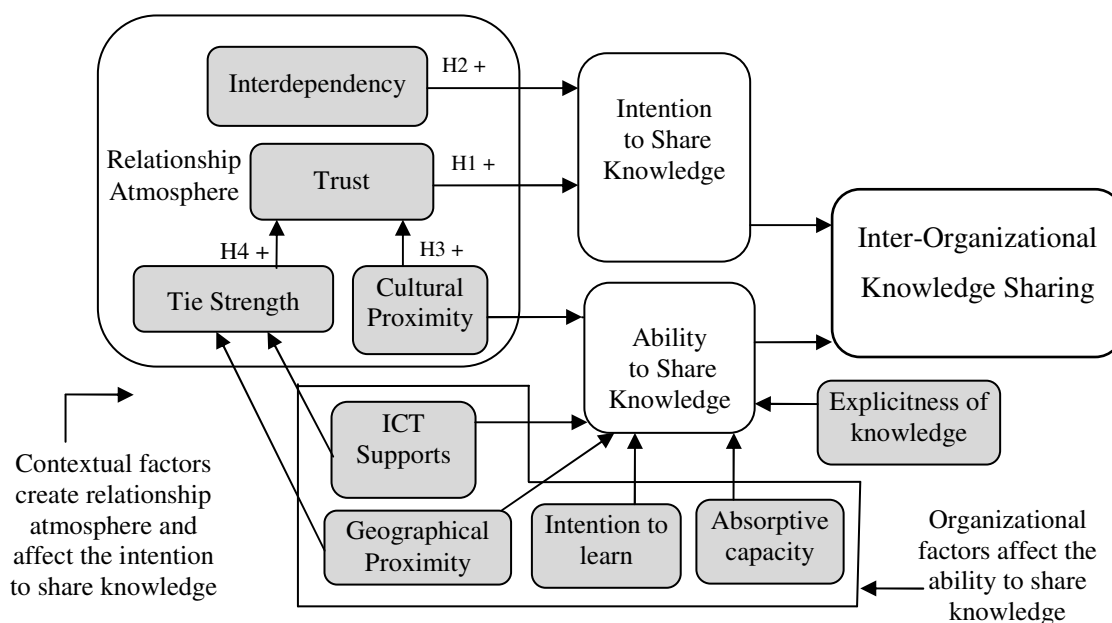


Figure 2 Drivers of Inter-Organizational knowledge Sharing

3.1.3 Cultural Proximity and Shared Values

Culture is referred as a set of parameters such as assumptions, values, beliefs, and interpretations of events shared by social collectives such as groups, nation and organizations (Abou-Zeid 2004). Two organizations have cultural proximity when they share the same or close culture based on factors including language, norms, values, meanings, and beliefs. Cultural proximity facilitates knowledge sharing for two reasons. First, it removes the barriers for understanding partners. These barriers include the lack of fluency in the language that results in knowledge ambiguity and causes even codified knowledge remains inaccessible. Second, cultural proximity helps in identifying the meanings and values of partner's behaviour (Simonin 1999). Cultural proximity and shared vision as cognitive dimension of social relationship facilitate knowledge sharing by promoting mutual understandings and by providing common vision and crucial bonding mechanism between two parties (Wijk et al. 2008).

In addition, cultural proximity and shared values play a critical role in increasing the ability to share knowledge. When organizational cultures are similar, organizations are expected to interact more easily and with better results without any need to explicate difficult interpretations. As a result, the ability to share knowledge will be increased and the process of trust building will be enhanced.

Therefore the present study hypothesizes that:

H 3: Cultural proximity between customer and supplier positively affects Knowledge sharing intention through the mediating role of trust.

3.1.4 Tie Strength

Tie strength reflects the closeness of the current and previous relationship between partners. Positive prior experience leads to an expectation about positive future interactions so the frequency of interactions and communication will be increased and will result in creating strong tie between partners. Close relationship between partners will lead to greater knowledge sharing (Wijk et al. 2008). The role of strong tie and prior experience between two organizations are addressed in the literature (Hansen 1999, Szulanski 1999, Lyles & Salk 1996, Simonin 1999, Preze-Nordtvedt et al 2008, Wijk et al 2008). The last hypothesis of the present study is:

H4: Tie strength through the mediating role of trust has positive influence on the knowledge sharing intention between supply chain partners.

3.2 Organizational Factors

There are factors that are related to the features and characteristics of organizations which either share knowledge with, or acquire knowledge from, other organizations. Factors such as intention to learn, absorptive capacity, ICT supports, Age, Size and geographical location of organizations indicate different characteristics of source and recipient organizations. So, they are referred as organizational factors. These factors are addressed by many researchers in the literature (e.g. Easterby-Smith et al., 2008; Albino et al. 1998, Nieminen 2005, Hau & Evangelista 2007, Wijk et al. 2008, Cummings & Teng 2003). Next sections describe these factors. These factors are not subject to the present investigation and constitute the future work by the authors.

3.2.1 Intention to learn

Intention to learn is viewed as an important factor in acquiring an external knowledge (Barson et al 2000; Cummings and Teng 2003; Smith et al., 2008). The organization with more intention to learn from external recourses would provide any type of resource that is required and create an appropriate environment for knowledge sharing. As a result, learning intent facilitates the ability to share knowledge.

3.2.2 Absorptive Capacity

According to Cohen and Levinthal (1990) absorptive capacity is presented as "an organization's ability to: (1) recognize the value of new external knowledge, (2) assimilate it and (3) apply it to commercial end". Based on this concept Lane et al. (2001) found support for the influence of an organization's absorptive capacity on its ability to understand new knowledge held by its partner. Similar knowledge base in both source and recipient organizations will result in easier interactions related to the knowledge sharing due to the common understandings of shared knowledge. Thus, absorptive capacity facilitates the ability to share knowledge between organizations.

3.2.3 ICT Infrastructure

ICT support in the form of extranet, web service and intranet play major role in bridging gaps of time and space between members of knowledge communities (Hoof 2004). Technology is considered as one of the components of KM systems to link the members together and support members to use and share knowledge within the KM system (Barson et al. 2000). Similarly, He et al. (2006) confirmed that for customer-supplier partnership to be optimized there should be strong ties and links between these organizations. The challenge of capturing, organizing, and disseminating knowledge in IO contexts can be facilitated by effective ICT support. ICT not only provides quick and accurate access to

databases and stored data but also it creates a link between organizations increasing the connectivity between them by providing internet-based discussion groups or electronic meetings that may finally lead to knowledge sharing (Turban 2006, Hendriks 1999). Thus, that ICT have positive effect on creating strong tie and link between organizations and also will increase the ability to share knowledge.

3.2.4 Geographical Proximity

Geographical proximity refers to the geographical distance between two organizations. Organizations in the same city or area have more geographical proximity. Geographical Proximity fosters the face-to-face communication and brings companies together. Thus it has positive effect on creating stronger tie and link between organizations that result in high levels of richness in interactions and facilitate the exchange of especially tacit knowledge (Knoben & Oerlemans, 2006). Thus geographical proximity increases the ability to share knowledge.

3.3 Nature of knowledge

Nature of knowledge refers to the tacitness or explicitness of knowledge. The nature of knowledge is regarded as a variable that influences knowledge sharing (Nonaka 1994). Tacit knowledge in particular is embedded in the individual's mind, and does not have a numerical or linguistic form. Sharing this type of knowledge is more complicated than explicit knowledge (Ibid). Findings of a study by Chen (2004) suggest that knowledge sharing is positively affected by the tacitness of knowledge, and that explicit knowledge is transferred in a more effective way than tacit knowledge. Explicitness of knowledge provides easier way to transfer and communicate knowledge. Thus, explicitness of knowledge will facilitate the ability to share knowledge.

4 RESEARCH METHODOLOGIES

This study applies positivist approach because the objective is to test the conceptual model in the particular domain of customer-supplier relationship. To test the proposed conceptual model, mix methodology (qualitative and quantitative methods) is adopted for data collection. In the first step of methodology, semi structured interviews are conducted in order to qualitatively examine and revise the conceptual model. This step is the subject of the present paper. The second step constitutes the future work and involves a survey based method on the revised conceptual model. The latter study tries to capture the points of view of organizations within the supply chain of automotive industry and obtain a practical view about the proposed research model. The guidelines for conducting the survey however are provided in Appendix 'A'.

Ten semi-structured interviews are conducted with managers and experts involved in IO knowledge sharing activities. This paper presents the result of these interviews that in turn, will lead to improving the conceptual model.

4.1 Selecting participants

Since this research is an inter-organizational study, the unit of analysis is 'organization'. This study tries to capture the determinants of knowledge sharing with supply chain partners in different organizations. As a result, participants in this study are selected from different organizations with each participant representing his/her organization. Participants are expected to respond to the questions regarding the knowledge sharing activities of their organizations with their supply chain partners. Managers and experts chosen for this study are involved in inter-organizational knowledge sharing activities and generally are equipped with the knowledge about collaboration and negotiations with partners. Moreover, in order to reduce variations due to industry differences, the current research selects participant organizations from the same industry that is the automotive industry, considering

the fact that automotive manufacturing companies also tend to work within big and knowledge intensive supply chains.

The procedure for selection of the interviewees was as follow:

- Managers whose responsibilities were somehow related to the supply chain activities in automotive industry were identified and were approached through email and asked to provide information about both their past and current experiences in IO knowledge sharing activities.
- Based on the information provided, potential interviewees were selected on the basis of their knowledge and expertise in the field of IO knowledge sharing in supply chain.

For selection of the survey participants, the following procedure is planned:

- Information about suppliers of automotive industry will be collected from the major car manufacturing companies.
- The survey questionnaire will be sent to about 500 suppliers and car manufacturers. It is expected that 150 – 200 responses will be received.

4.2 Data Collection and Research Instruments

Based on the proposed conceptual model of Figure 2, two instruments have been designed for this study: one semi-structured interview questionnaire (Appendix B) and a structured survey questionnaire (Appendix A). Both questionnaires have been a synthesis of either the previously developed measures, or are composed based on the available definitions in the literature. This paper only presents the interview results. Follow up questions, in addition to those shown in Appendix 'B', have been asked in the interviews depending on the responses. Interviewees were also asked to express their opinion about factors that deemed to be important in their organizations for intention to share knowledge.

5 THE RESULTS OF THE INTERVIEWS

Ten participants from 4 organisations were interviewed. The participants included managing director, as well as project managers related to technology transfer. Two of the four organisations were among the major global automaker companies, and the other two organisations were suppliers of the above organisations. Both of the auto maker companies had already initiated knowledge sharing processes with their suppliers. These companies had already established training systems for transferring valuable knowledge to their suppliers. One of the respondents mentioned:

“... we have a group of experts who are active in teaching new methods and technologies to our suppliers, either by the suppliers' requests, or in many cases our experts recommend new ways of performing activities in order to reduce cost or increase quality of the job and both sides would benefit.”

The interviewees' responses were analysed and coded using interpretive analysis. Themes and patterns in the replies were defined. There were no inconsistencies between the findings of the interviews and the proposed conceptual model. Most of the interviews directly or indirectly addressed the importance of trust, dependency to partners, and closer relationship between partners, culture and shared values. One respondent mentioned:

“...We don't transfer any of our experience and technologies to other organizations that we are not sure about their future behaviour and how they want to use the provided skills or technology. For transferring knowledge to our suppliers we take into consideration the history and quality of our relationships with our suppliers. Usually our experience and knowledge are more likely to be transferred to our older suppliers with longer history of relationships “

In addition to the history and quality of relationship mentioned above, seven interviewees also mentioned that the ‘type of knowledge’ is an important factor for intention to share knowledge. The type of knowledge appears to have different effects on intention to share it depending on its criticality and rarity for the industry. Various types of knowledge in automotive industry range from knowledge related to production line, designing the products, internal and external logistics to marketing and quality control methods. The more critical the knowledge is for competitive advantage, the less intention exists to share that knowledge. One of the respondents mentioned:

“...Well, sharing knowledge depends on what type of expertise or skills we are requested to share and which organization is requesting. For example if one of our permanent suppliers asked us to teach their employees more effective quality control method, we won’t hesitate to do so, because sharing this knowledge doesn’t hurt our job and we need their products. In addition, it improves quality of the parts that they deliver to us; so it has benefits for us too. On the other hand, if our partner requests to know about our production methods and technologies, we definitely won’t provide such knowledge because this is our competitive advantages.”

Findings from interviews indicate that in addition to the factors in the proposed conceptual model, two other factors will also affect intention to share knowledge in automotive industry. These are: (i) ‘type of knowledge’ related to the company’s competitive advantages, and (ii) ‘expected benefit’ from sharing knowledge including maintaining/expanding relationships with partners. The proposed conceptual model will be revised accordingly. The survey questionnaire will then be revised based on the new model.

6 CONCLUSIONS AND FUTURE WORK

In this research major factors affecting IO knowledge sharing are identified through literature review and synthesis. A conceptual model is then developed and qualitatively examined through ten interviews in automotive industry. Interview results validate the model constructs. In addition, two new factors are identified. In future study, these factors will be incorporated in the proposed model and the revised model will be tested through a survey based methodology. The result of this study will provide new insight into IO knowledge sharing that is useful for organizations in particular automotive industry in relation to sharing knowledge with their supply chain partners. In addition, this study developed an instrument in order to measure the construct of the theoretical model. The theoretical contribution of this study is exploration of two new factors for IO knowledge sharing intention.

References

- Abou-Zeid, E. S. (2005). A culturally aware model of inter-organizational knowledge transfer. *Knowledge management research & practice* 3(3): 146-155.
- Adobor, H. (2006). Inter-firm collaboration: configuration and dynamics. *Competitiveness Review: An International Business Journal incorporating Journal of Global Competitiveness* 16(2): 122-134.
- Alavi, M. and D. E. Leidner (1999). Knowledge management systems: issues, challenges, and benefits. *Communications of the AIS* 1(2es).
- Albino, V., A. C. Garavelli, et al. (1998). Knowledge transfer and inter-firm relationships in industrial districts: the role of the leader firm. *Technovation* 19(1): 53-63.
- Barson, R. J., G. Foster, et al. (2000). Inter-and intra-Organisational barriers to sharing knowledge in the extended supply-chain, Citeseer.
- Bock, G. W. and Y. G. Kim (2002). Breaking the myths of rewards: An exploratory study of attitudes about knowledge sharing. *Information Resources Management Journal* 15(2): 14-21.
- Chen, C. Y., C. Y. Chen, et al. (2006). Supply Chain Management Implementation in Perspective of Knowledge Transfer.
- Daneshgar, F. and J. Wang (2007). Validation of the awareness net model for the Australian security investment processes. *Knowledge-Based Systems* 20(8): 736-744.

- Easterby-Smith, M., M. A. Lyles, et al. (2008). Inter-organizational knowledge transfer: current themes and future prospects. *Journal of Management Studies* 45(4): 677-690.
- Hau, L. N. and F. Evangelista (2007). Acquiring tacit and explicit marketing knowledge from foreign partners in IJVs. *Journal of Business Research* 60(11): 1152-1165.
- He, Q., A. Ghobadian, et al. (2006). Knowledge transfer between supply chain partners: a conceptual model. *International Journal of Process Management and Benchmarking* 1(3): 231-262.
- Heide, J. B. and A. S. Miner (1992). The shadow of the future: Effects of anticipated interaction and frequency of contact on buyer-seller cooperation. *Academy of Management Journal*: 265-291.
- Hendriks, P. (1999). Why share knowledge? The influence of ICT on the motivation for knowledge sharing. *Knowledge and process management* 6(2).
- Hinds, P. J. and J. Pfeffer (2003). Why organizations don't "know what they know": Cognitive and motivational factors affecting the transfer of expertise. *Sharing expertise: Beyond knowledge management*: 3-26.
- Jashapara, A. (2004). *Knowledge management: an integral approach*, Pearson Education.
- Karahanna, E., J. R. Evaristo, et al. (2002). Levels of culture and individual behaviour: An integrative perspective. *Advanced Topics in Global Information Management*: 30.
- Ke, W. and K. K. Wei (2007). "Factors affecting trading partners' knowledge sharing: Using the lens of transaction cost economics and socio-political theories." *Electronic Commerce Research and Applications* 6(3): 297-308.
- Kirsch, J. L. and W. R. King (2005). Antecedents of knowledge transfer from consultants to clients in enterprise system implementations. *MIS Quart* 29(1): 59-85.
- Knoben, J. and L. A. G. Oerlemans (2006). Proximity and inter-organizational collaboration: A literature review. *International Journal of Management Reviews* 8(2): 71-89.
- Madlberger, M. (2009). what drives firms to engage in inter organizational information sharing in supply chain management?. *International journal of e-collaboration* 2(5): 18.
- Nieminen, H. T. (2005). *Successful Inter-Organizational Knowledge Transfer: Developing Pre-Conditions through the Management of the Relationship Context*.
- Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization science*: 14-37.
- Pérez-Nordtvedt, L., B. L. Kedia, et al. (2008). Effectiveness and efficiency of cross-border knowledge transfer: an empirical examination. *Journal of Management Studies* 45(4): 714-744.
- Seyyedeh, N., A. Sydney, et al. Investigating Inter-Organizational Knowledge Sharing Intention in Supply Chain Partnership.
- Simonin, B. L. (2004). An Empirical Investigation of the Process of Knowledge Transfer in International Strategic Alliances. *Journal of International Business Studies* 35(5): 407-428.
- Spekman, R. E., J. W. Kamauff, et al. (1998). An empirical investigation into supply chain management: a perspective on partnerships. *Supply Chain Management: An International Journal* 3(2): 53-67.
- Szulanski, G. (1996). Exploring internal stickiness: Impediments to the transfer of best practice within the firm. *Strategic management journal*: 27-43.
- Tsang, E. W. K. (2002). Acquiring knowledge by foreign partners from international joint ventures in a transition economy: learning-by-doing and learning myopia. *Strategic Management Journal*: 835-854.
- Turban, E., E. McLean, et al. (2004). *Information technology for management: Transforming organizations in the digital economy*, Wiley Text Books.
- van den Hooff, B., W. Elving, et al. (2003). *Knowledge sharing in knowledge communities*, Kluwer Academic Publishers.
- Van Wijk, R., J. J. P. Jansen, et al. (2008). Inter-and intra-organizational knowledge transfer: a meta-analytic review and assessment of its antecedents and consequences. *Journal of Management Studies* 45(4): 830-853.

Appendix 'A' Measures representing construct of the research model

Constructs	Definitions	Measures of the constructs used for developing questionnaire items	References
Trust	It is simply a belief that one organization acts in a consistent manner and will perform in accordance with expectations and intentions (Speckman et al. 1998)	<ol style="list-style-type: none"> 1. Keeping promises 2. Being Reliable 3. Having consistency in action 4. Considering partner's concerns 	<p>Kumar et al. 1995 Madlberger 2009 Li 2005</p>
Dependency	Organizations are dependent to one another when their interactions and collaboration are vital to remain in a competitive environment (He et al., 2006)	<ol style="list-style-type: none"> 1. Lack of Alternative 2. Influenced by partner's decisions 3. Being restricted by partner 	<p>Madlberger 2009</p>
Cultural proximity	The degree to which two organization share the same or close culture based on factors including, norms, values, meanings, vision and beliefs.	<ol style="list-style-type: none"> 1. Shared Values, Beliefs, 2. Similar Business practices 3. Similar Routines, Norms 	<p>Cummings & Teng 2003 Li 2005 Simonin 2004</p>
Tie Strength	Tie strength reflects the closeness of the relationship and the level of previous interactions between two organizations (Wijk et al, 2008)	<ol style="list-style-type: none"> 1. Having long term-oriented relationship 2. Having frequent communication and interactions 3. Having regular meetings 	<p>Van Wijk et al Madlberger 2009</p>
Intention to share knowledge	The degree to which one believes that one will engage in a knowledge sharing act (Bock et al., 2005)	<ol style="list-style-type: none"> 1. Intention to share skills or know-how with other organization more frequently in the future 2. Trying to share expertise from education or training with other organization in a more effective way in future. 3. Always providing manuals, methodologies and models at the request of other organizations. 4. Trying to share work reports and official documents with other organization more frequently in the future. 	<p>Bock et al., 2005</p>

Appendix 'B'

Semi structured interview questionnaire

Definitions provided to respondents

In this questionnaire, knowledge means the organization's experience, skills or something which is useful in solving problems.

Knowledge sharing refers to providing access or transferring one organization's knowledge to other organizations.

In the following questions Partner refers to a trading partner which can be customer or supplier organization.

Trust

1. Could you please explain how your organization's belief regarding its partner's honesty influences the intention to share knowledge with that organization?

3. Could you please explain how your organization's belief about the consistency of its partner's actions influences the intention to share knowledge?

Dependency

1. Could you please explain how lack of alternative t be substituted with a partner can influence on your organization's intention to share knowledge with that partner?

2. Does the need to having coordination and ongoing adjustment with your organization's partner have any influence on the intention to share knowledge with that partner?

Cultural proximity and Shared vision

1. In your organization do you think that having similar organizational culture with a partner has any effect on level of trust in that partner?

2. Does your organization put more trust and reliance on its partner with similar values and beliefs?

Tie Strength

Could you please explain that how frequent and long term relationship with a partner influence on the intention to share knowledge with that partner?

Follow up questions

1. IS your organization involved in knowledge sharing with its partners? How?

1. Could you please explain more about the factors that are important in your organization in relation to intention to share knowledge?

2. When a trading partner asks for knowledge of your organization, what factors do you take into consideration to decide whether to share knowledge or not?

3. What are the characteristics of those partners which your organization prefers to share knowledge with?

4. Which trading partners do you have more trust with?